

**Remarks**

Applicants thank the Examiner for the courtesy extended in the interview conducted on February 14, 2006.

In this amendment, claims 1-29 and 31-39 are cancelled without prejudice to pursue those claims in a separate application. Claims 1-29 and 34-39 were previously withdrawn in response to a restriction requirement. Claims 30 and 40 are amended, and new claims 41-45 are added. Accordingly, claims 30 and 40-45 are now pending in this application.

In the Office Action dated January 27, 2006 the Examiner rejected claims 30 and 32 under 35 U.S.C. § 102(b) as being anticipated by Reny, WO89/09806. Claims 33 and 40 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Reny, WO89/09806. Claims 30, 32, 33 and 40 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Maes et al., U.S. Patent No. 5,366,651, or in view of Meyer et al., Patent No. 5,118,434, or in view of Wood, U.S. Patent No. 4,455,248. Claims 30, 32, 33 and 40 were also provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-13 of copending Application No. 10/264,041; claims 1-10 of Application No. 10/347,900; claims 27-50 of Application No. 10/910,497; and claims 22-29 of Application No. 10/935,897. Applicants respectfully request reconsideration in view of the amendments to the claims and the remarks set forth below.

Claims 32 and 33 have been cancelled, and the rejections of those claims are therefore rendered moot.

Claim 30 has been amended to recite that the method of the present invention for reducing the oral toxicity of an ethylene glycol based, non-aqueous heat transfer fluid

comprises mixing a non-aqueous, ethylene glycol based heat transfer fluid with propylene glycol to achieve a propylene glycol concentration of between about 5 percent by weight and 30 percent by weight of the total weight of the ethylene glycol and propylene glycol in the resulting heat transfer fluid. Amended claim 30 further recites that the resulting heat transfer fluid resulting from combining the ethylene glycol based fluid and the propylene glycol has an LD<sub>50</sub> for oral toxicity in rats of greater than 10,000 mg/kg. Claim 30 has been further amended to recite that the resulting fluid contains at least one corrosion inhibiting additive that is soluble in both ethylene glycol and propylene glycol, and that does not require the presence of water to dissolve in the fluid or to enable the additive to function (i.e. water is not required for the additive to dissociate or otherwise perform its function).

The amendments to claim 30 are fully supported in the specification. The specification describes a method for reducing the oral toxicity of an ethylene glycol based fluid that may be used as a heat transfer fluid. In preferred embodiments, the fluid comprises ethylene glycol and propylene glycol. See, e.g. page 17, lines 3-10. In addition, as discussed in detail below, oral rat toxicity tests were conducted using fluids that contained 5 percent by weight propylene glycol and 30 percent propylene glycol. See, e.g. page 22, line 11 to page 23, line 9. Accordingly, the concentration range for propylene glycol recited in claim 30 as amended is fully supported by the specification.

At pages 20-24 of the specification, the results of toxicity tests of various combinations of ethylene glycol and propylene glycol within the range of between 5 percent to 30 percent propylene glycol (as a percentage of the ethylene glycol and propylene glycol in the fluid) are discussed. As set forth on page 22, line 11 of the specification, the fluid containing 30 percent by weight propylene glycol (based on the total weight of propylene glycol and ethylene glycol in the fluid) had an LD<sub>50</sub> for acute

oral toxicity in rats that could not be calculated, but would be understood by one skilled in the art to be greater than 21,000 mg/kg. As set forth on page 23, lines 3-9 of the specification, the fluid containing 5 percent by weight propylene glycol (based on the total weight of propylene glycol and ethylene glycol in the fluid) had an LD<sub>50</sub> for acute oral toxicity in rats of approximately 15,000 mg/kg. Accordingly, for heat transfer fluids within the claimed range of about 5 percent by weight to 30 percent by weight propylene glycol (based on the total weight of propylene glycol and ethylene glycol in the fluid), the heat transfer fluids have an LD<sub>50</sub> for acute oral toxicity in rats that is greater than about 10,000 mg/kg as recited in claim 30 as amended.

Applicants note that the metes and bounds of the claim are definitively set forth in claim 30 as amended. The recitation that the LD<sub>50</sub> for acute oral toxicity in rats that is greater than 10,000 mg/kg is supported in the specification, which describes toxicity testing for the claimed heat transfer fluids containing between about 5 percent by weight propylene glycol and 30 percent by weight propylene glycol (as a percentage of the total weight of propylene glycol and ethylene glycol in the fluid). Thus, the method of amended claim 30 is fully described by the range of propylene glycol in the fluid and the oral toxicity of the fluid containing propylene glycol within the claimed range.

The recitation in amended claim 30 that the heat transfer fluid contain at least one corrosion inhibitor additive that is soluble in ethylene glycol and propylene glycol and that does not require water to dissolve or to perform its intended function is supported in the specification at, for example, page 26, lines 5-16.

Claim 40 has been amended to recite an embodiment of the invention in which the resulting fluid contains between about 5 percent by weight and about 10 percent by weight propylene glycol.

New claims 41-45 add the further step of adding at least one corrosion inhibitor selected from a molybdate salt, a nitrate salt, and an azole, such as for example sodium molybdate, sodium nitrate, and tolytriazole. The use of these corrosion inhibitor additives is supported in the specification at, for example, page 26, line 5 to page 27, line 21.

No new matter is added.

As set forth in claims 30 and 40 as amended and new claims 41-45, the present invention is directed to a method to reduce the oral toxicity of an ethylene glycol based, non-aqueous heat transfer fluid. As described in the specification, the heat transfer fluid may be used, for example, as a heat transfer fluid in internal combustion engines. Propylene glycol is added to the ethylene glycol based, non-aqueous heat transfer fluid such that the concentration of the propylene glycol is between 5 percent by weight and 30 percent by weight of the total weight of the ethylene glycol and the propylene glycol in the resulting fluid. As recited in Claim 30 as amended, the fluid contains at least one corrosion inhibitor additive that is soluble in ethylene glycol and propylene glycol, and that does not require the presence of water in the fluid to remain dissolved in the fluid. The resulting fluid has an LD<sub>50</sub> value for oral toxicity in rats of greater than 10,000 mg/kg. As described in the specification at pages 20-24, the inventors unexpectedly discovered that the addition of propylene glycol to a non-aqueous, ethylene glycol based heat transfer fluid reduced the oral toxicity of the fluid to levels much lower than would be predicted based upon the oral toxicity of the individual fluids (note that a higher LD<sub>50</sub> indicates lower oral toxicity, i.e. more material must be ingested to cause a toxic effect). As shown in Fig. 3, in fluids containing 70% or more ethylene glycol (i.e. 30% or less propylene glycol), the predicted LD<sub>50</sub> in rats was about 6,000 mg/kg or less. The present inventors discovered that the addition of relatively low levels of propylene glycol reduced

the oral toxicity of ethylene glycol based fluids to much lower levels than expected or predicted, rendering these fluids much safer in storage and in use.

As described in the specification at, inter alia, pages 11-14 and as recited in the amended claims, the method of the present invention results in a non-aqueous ethylene glycol based fluid which is prepared without the use of water and is used without the addition of any water. Water is not used in the fluid as a mixing agent or as a means of heat transfer, and is only present, if at all, as an impurity. As described in the specification at, inter alia, pages 17-20, the heat transfer fluids of the mixtures described in the present application exhibit the necessary physical properties, such as, for example, viscosity and vapor pressure, to function effectively as heat transfer fluids in most applications.

**The Rejections Under 35 U.S.C. §§ 102(b) and 103(a) Based Upon Reny**

Claim 30 stands rejected under 35 U.S.C. § 102(b) as anticipated by Reny, WO89/09806. To anticipate a claim under Section 102(b), a single prior art reference must disclose each and every element set forth in the claim. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP § 2131. Reny does not disclose any composition that meets all of the limitations of claim 30 as amended. Specifically, Reny does not disclose a non-aqueous heat transfer fluid comprising ethylene glycol and propylene glycol that contains no additives requiring the presence of water to dissolve the additive or to enable the additive to perform its intended function.

Reny describes a heat transfer fluid containing alkylene glycols, corrosion inhibitor additives, phosphoric acid to buffer the pH of the fluid and up to 10 percent water. In the rejection under Section 102(b), the Examiner, on page 5 of the Office Action, relies on statements at page 3, lines 1-15 of Reny which generally describe a coolant composition that contains at least 90 weight percent of an alkylene glycol or a

mixture of two or more alkylene glycols and a corrosion inhibiting amount of an inhibitor. This portion of Reny does not describe the use of any particular alkylene glycols, much less describe the use of ethylene glycol and propylene glycol in the claimed proportions. The Examiner attempts to address this deficiency by referring to the paragraph at page 3, line 33 to page 4, line 11, which refers to alkylene glycols, including ethylene glycol and propylene glycol, that may be used in the heat transfer fluid described in Reny. The Examiner goes on to state that “[t]his embodiment contains no water.”

This portion of Reny cited by the Examiner does not discuss at all whether water is added to the heat transfer fluid. However, in the discussion of Reny at page 5 of the Office Action, the Examiner overlooks the requirement at page 3, lines 6-7 of Reny that the heat transfer fluids contain “from 0 to 3 weight parts of phosphoric acid.” As described in the specification of the present application at, for example, page 9, lines 7-14, phosphoric acid is used in many heat transfer fluids to buffer the pH of the fluid, and these heat transfer fluids require added water to dissolve the phosphoric acid and enable it to function as a buffer. Consistent with this, at page 5, lines 22-26, Reny explains that phosphoric acid “is employed to maintain the pH of the coolant composition in the range from 7 to 9.” Any heat transfer fluid that includes a phosphoric acid buffer necessarily includes added water.

Reny states at page 5, lines 24-26, that “[s]ome alkylene glycol mixtures are within the pH limits, and in such cases no pH adjustment is needed.” Reny does not disclose, however, any alkylene glycol mixtures that would not require the addition of phosphoric acid as a pH buffer, and he certainly does not describe any combinations of ethylene glycol and propylene glycol that did not include a phosphoric acid buffer. To the contrary, all of the examples of the fluid and preferred embodiments disclosed in

Reny, including the examples of mixtures of ethylene glycol and propylene glycol in Table 1, contain at least 1 part water added to the alkylene glycol, and the addition of phosphoric acid, a substance that requires water to enable it to function. Thus, in all of the heat transfer fluids comprising combinations of ethylene glycol and propylene glycol described by Reny, phosphoric acid and water are included to form a pH buffer.

Phosphoric acid, the use of which is taught by Reny in heat transfer fluids comprising ethylene glycol and propylene glycol, is an undesirable ingredient in a non-aqueous heat transfer fluid for a number of reasons. In order for the phosphoric acid to perform its function as an acid, there must be sufficient water added for the phosphoric acid to ionize. Ionized phosphoric acid forms phosphate compounds with engine metals such as iron. The resulting phosphate compounds have limited solubility and will precipitate in a low water environment, such as in a non-aqueous heat transfer fluid. For example, a manufacturer of heat transfer fluid additives, Penray Companies, Inc., states that "Silicate and phosphate, while valuable as corrosion inhibitors in engine coolant, have limited solubility. That meant that if the antifreeze . . . got too concentrated in the coolant [i.e. there is not sufficient water, as in a non-aqueous heat transfer fluid], then the excess phosphate and/or silicate would drop out of the coolant." *See* [www.penray.com/coolingtechfacts/](http://www.penray.com/coolingtechfacts/).

Accordingly, Reny does not describe a heat transfer fluid as defined in the specification and recited in claim 30 as amended and dependent claims 40-45 comprising ethylene glycol and propylene glycol and that does not contain any additives that require water to dissolve the additives in the fluid or to enable the additives to function in the fluid. For at least these reasons, claim 30 as amended and dependent claims 40-45 are not anticipated by Reny.

**The Rejection Under 35 U.S.C. § 103(a) Based Upon Meyer**

Claims 30 and 40 stand rejected under 35 U.S.C. § 103(a) in view of Meyer, U.S. Patent No. 5,118,434. Meyer describes deicing solutions comprising alkylene glycols, water, corrosion inhibitors, and one or more polymeric additives. Meyer states at Column 2, lines 58-61 that the composition contains “up to 50 percent water” and preferably between 1 and 10 percent water by weight. Meyer does not describe a heat transfer fluid. Meyer describes a deicing fluid containing one or more polymeric additives. Meyer states at col. 1, lines 24-27 that polymeric additives are added to a deicing fluid to thicken the fluid (i.e. to increase the viscosity of the fluid). The required polymeric additives of Meyer’s composition are further intended to prevent precipitation of materials contained in the composition, and precipitation of materials contained in water that may be mixed with the composition. While polymeric additives may be desirable in a deicing fluid, they are generally undesirable in a heat transfer fluid.

It is known in the art that heat transfer is improved when the viscosity of a heat transfer fluid is reduced. At page 18 of the specification, the advantages of the reduced viscosity of EG and PG mixtures, as compared to the higher viscosity of PG alone, is discussed. At page 18, lines 4-5, the inventors note that “viscosity at any given temperature decreased as the percentage of EG increased.” Indeed, a major advantage of combining EG and PG in a non-aqueous heat transfer fluid is to decrease the viscosity of the PG, thereby increasing the performance of the heat transfer fluid. It would not be obvious to one skilled in the art to modify Meyer by removing the polymeric additive described for the deicing fluid in Meyer to arrive at the heat transfer fluid produced by the method of the present invention.

Moreover, the composition described in Meyer requires the presence of added water to maintain the additives described therein in solution. Indeed, Meyer states at Col.



2, lines 59-61 that the composition preferably contains between about 1 and 10 percent by weight water. All of the fluids described in Meyer contain some added water. As recited in claim 30 as amended, and as described in the specification, the composition of the present invention is non-aqueous, which is defined in the specification as meaning that there is no added water, and that water is present only as an impurity. As recited in claim 30 as amended, the only additives present in the fluids formed by the method of the present invention are soluble in ethylene glycol and propylene glycol. Meyer does not teach or suggest a fluid that does not contain added water.

At page 7 of the Office Action, the Examiner correctly states that Meyer does not teach with sufficient specificity a method for reducing the toxicity of an ethylene glycol based fluid by the addition of propylene glycol. The Examiner incorrectly states at page 8 of the Office Action that it would have been obvious to one skilled in the art to reduce the oral toxicity of an ethylene glycol based fluid because Meyer teaches or suggests reducing the oral toxicity by addition of a diol such as propylene glycol. This statement by the Examiner is incorrect because Meyer does not recognize or discuss the problem of reducing the oral toxicity of ethylene glycol based fluids, much less describe, teach or suggest a method to reduce the toxicity of a non-aqueous ethylene glycol based fluid as recited in claim 30 as amended. Moreover, Meyer does not describe, teach or suggest, combining ethylene glycol containing fluids with propylene glycol in any specific proportions, much less the specific proportions recited in claim 30 as amended, which results in a fluid having an unexpectedly large decrease in oral toxicity. Meyer is therefore insufficient to support a rejection under 35 U.S.C. § 103(a). See In re Baird, 16 F.3d 380, 382 ("The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious."); MPEP § 2144.08.

It has been known to those skilled in the art that the addition of a less toxic substance to a more toxic substance will result in a mixture that is reduced in toxicity compared to the toxicity of the more toxic substance as a result of dilution of the more toxic substance. The formula used to predict the LD<sub>50</sub> values for mixtures of substances is described in the specification at page 21. The curve shown in Fig. 3 is generated using the formula described in the specification. In Fig. 3, the predicted LD<sub>50</sub> in rats for the claimed range of combinations of ethylene glycol and propylene glycol was about 6,000 mg/kg or less. As set forth in the specification at pages 24-27, the inventors discovered that the claimed compositions had an LD<sub>50</sub> in rats of about 15,000 mg/kg or more. Where, as here, a claimed range achieves unexpected results, the claimed range is patentable over the prior art. In re Woodruff, 919 F.2d 1575 (Fed. Cir. 1990); MPEP § 2144.05.

For at least these reasons, the claims as amended are not obvious under 35 U.S.C. § 103(a) in view of Meyer.

**The Rejection Under 35 U.S.C. § 103(a) Based Upon Maes**

Maes is directed to a corrosion inhibitor for use in aqueous solutions, and to antifreeze/coolant compositions containing such a corrosion inhibitor. See Maes at col. 1, line 8. Maes states that the invention described therein “is directed to a novel corrosion inhibitor composition for use in aqueous systems, an antifreeze/coolant concentrate containing the inhibitor composition and aqueous antifreeze/coolant compositions containing the inhibitor composition.” See Maes at col. 2, lines 54-58. Thus, Maes is directed primarily toward the corrosion inhibitor used in aqueous antifreeze/coolants.

Maes describes a fluid for use in aqueous solution comprising “a water soluble liquid alcohol freezing point depressant and a corrosion inhibitor comprising carboxylic acids or their salts and a triazole compound . . . .” Maes at col. 2, lines 62-65 (emphasis

added). *See also* Maes at col. 9, lines 25-26 (claim 1 directed to a concentrate comprising “a water soluble freezing point depressant”) (emphasis added). Accordingly, Maes describes a composition having a single water soluble liquid freezing point depressant.

Maes does not teach or suggest combining ethylene glycol with propylene glycol for any purpose, much less for the purpose of forming a non-aqueous heat transfer fluid having reduced oral toxicity. At col. 3, lines 65-69, Maes states that freezing point depressants suitable for the fluid he describes are “glycol” and “glycol ethers.” These are very different chemicals.

To those skilled in the art, the term “glycol” in the singular means ethylene glycol, a polyhydric alcohol with direct bonding between the carbon atoms. For example, in the Handbook of Chemistry and Physics, 42<sup>nd</sup> ed., in the listing of Physical Constants of Organic Compounds on page 992, the listing for “ethylene glycol” says merely “see glycol” with no data listed. The listing for “Glycol” on page 1016 provides data only for ethylene glycol.

Glycol ethers, on the other hand, consist of hydrocarbon groups bonded through an oxygen atom. At col. 3, line 69 through col. 4, line 8, Maes states, “The glycol ethers which can be deployed as major components in the present composition include glycols such as ethylene glycol, diethylene glycol, propylene glycol, and dipropylene glycol, and glycol monoethers such as the methyl, ethyl, propyl, and butyl ethers of ethylene glycol, diethylene glycol, propylene glycol, and dipropylene glycol.” The sole mention of propylene glycol by Maes appears in his listing of glycol ethers, i.e. as propylene glycol ether. Ethylene glycol, the preferred freezing point depressant in Maes, is listed at col. 3, line 67 as “glycol.”

Maes nowhere describes combining ethylene glycol and propylene glycol in any proportion. At col. 3, line 67, Maes’ reference to “depressants” in the plural is only in

the context of introducing the listing of substances “which can be employed as major components in the present composition”. Col. 3, line 68 to Col. 4, line 1. Maes does not teach or suggest using combinations or mixtures of more than one alcohol freezing point depressant. Indeed in his listing of materials that can be used as “the major component” of the fluid, Maes does not state that combinations or mixtures of the listed substances could be used in the compositions described in Maes.

Throughout the specification and claims, Maes refers solely to the use of a single water-soluble liquid alcohol freezing point depressant as the major component in the anti-freeze compositions described therein. All of the 16 examples provided by Maes contain only ethylene glycol as the alcohol freezing point depressant. *See* col. 5, line 3 to col. 6, line 54. In claim 1, the only independent claim in Maes, the composition is described as containing “a water soluble alcohol freezing point depressant.” (emphasis added). Accordingly, when the specification and the claims are read as a whole, it is plain that Maes teaches only the use of a single alcohol freezing point depressant in the composition described in Maes.

At col. 3, line 65 to col. 4, line 68, Maes states “The antifreeze formulations most commonly used include water and water soluble liquid alcohol freezing point depressants such as glycol and glycol ethers.” In this sentence, Maes uses glycol, which would be understood by one skilled in the art as ethylene glycol, in the singular and glycol ethers in the plural, and throughout the specification, Maes describes antifreeze formulations containing a single glycol, indicating that only a single glycol (i.e. ethylene glycol) is used in the formulation. Thus, Maes plainly describes the use of a single glycol and Maes does not teach or suggest any combination of glycols, much less the combination and proportions recited in the claims. Indeed, as discussed above, glycol ethers are not glycols at all, and the listing of propylene glycol in Maes is within the listing of glycol

ethers, i.e. propylene glycol ether. This is not propylene glycol as claimed in the claims as amended.

At page 7 of the Office Action, the Examiner correctly states that Maes does not teach with sufficient specificity a method for reducing the toxicity of an ethylene glycol based fluid by the addition of propylene glycol. The Examiner incorrectly states at page 8 of the Office Action that it would have been obvious to one skilled in the art to reduce the oral toxicity of an ethylene glycol based fluid because Maes teaches or suggests reducing the oral toxicity by addition of a diol such as propylene glycol. Maes does not recognize or discuss the problem of reducing the oral toxicity of ethylene glycol based fluids, much less describe, teach or suggest a method to reduce the toxicity of a non-aqueous ethylene glycol based fluid as recited in claim 30 as amended. Moreover, Maes does not describe, teach or suggest, combining ethylene glycol containing fluids with propylene glycol in any specific proportions, much less the specific proportions recited in claim 30 as amended, which resulted in a heat transfer fluid having an unexpectedly large decrease in oral toxicity. Maes is therefore insufficient to support a rejection under 35 U.S.C. § 103(a). See In re Baird, 16 F.3d 380, 382 ("The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious."); MPEP § 2144.08.

It has been known to those skilled in the art that the addition of a less toxic substance to a more toxic substance will result in a mixture that is reduced in toxicity compared to the toxicity of the more toxic substance as a result of dilution of the more toxic substance. The formula used to predict the LD<sub>50</sub> values for mixtures of substances is described in the specification at page 21. The curve shown in Fig. 3 is generated using the formula described in the specification. In Fig. 3, the predicted LD<sub>50</sub> in rats for the claimed range of combinations of ethylene glycol and propylene glycol was about 6,000

mg/kg or less. As set forth in the specification at pages 24-27, the inventors discovered that the claimed compositions unexpectedly had an LD<sub>50</sub> in rats of about 15,000 mg/kg or more. Where as here a claimed range achieves unexpected results, the claimed range is patentable over the prior art. In re Woodruff, 919 F.2d 1575 (Fed. Cir. 1990); MPEP § 2144.05.

For at least these reasons, the claims as amended are not obvious under 35 U.S.C. § 103(a) in view of Maes.

**The Rejection Under 35 U.S.C. § 103(a) Based Upon Wood**

Claims 30 and 40 also stand rejected under 35 U.S.C. § 103(a) in view of Wood, U.S. Patent No. 4,455,248. Wood describes an antifreeze composition for use in automotive cooling systems or other heat transfer services. Wood states that the composition “necessarily” contains sodium metasilicate. Col. 3, lines 27-55. Although Wood states that “the antifreeze may be formulated as a concentrate using little or no water”, (col. 3, lines 7-8), the requirement that the fluid described by Wood contain sodium metasilicate necessitates the addition of sufficient water for the sodium metasilicate to dissolve and remain in solution, i.e. in order for the sodium metasilicate to function. As set forth in the information sheet from the Occupational Safety & Health Administration, ([http://www.osha.gov/dts/chemical sampling/data/CH\\_267715.html](http://www.osha.gov/dts/chemical%20sampling/data/CH_267715.html)) sodium metasilicate is not soluble in alcohols such as glycols, but is readily soluble in water. Accordingly, for at least this reason, Wood does not teach or suggest a heat transfer fluid composition as recited in claim 30 as amended, which recites that the heat transfer fluid of the present invention contain no additive requiring the presence of water in the fluid to dissolve the additive or to enable the additive to function.

Also, Wood does not teach or suggest a method to reduce the toxicity of a non-aqueous, ethylene glycol based heat transfer fluid as recited in claim 30 as amended.

Wood states that the antifreeze composition is used in the heat transfer service by diluting the composition with water. Col. 3, lines 16-22. Thus, Wood describes a method using an aqueous heat transfer fluid, which is plainly different from the non-aqueous heat transfer fluid as defined in the specification and recited in the claims as amended.

Moreover, although Wood generally states that mixtures of glycols may be used in the anti-freeze compositions described therein, Wood does not teach or suggest combining ethylene glycol and propylene glycol in any specific proportions, much less in the proportions recited in the amended claims. As described in the application, the present inventors unexpectedly discovered that adding relatively small amounts of propylene glycol to ethylene glycol unexpectedly resulted in a non-aqueous heat transfer fluid having substantially reduced toxicity. Wood does not teach or suggest combining ethylene glycol and propylene glycol in any specific amounts, much less in the proportions recited in the amended claims. Wood is therefore insufficient to support a rejection under 35 U.S.C. § 103(a). See In re Baird, 16 F.3d 380, 382 (“The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious.”); MPEP § 2144.08.

Accordingly, for at least these reasons, the methods recited in the amended claims are not described, taught or suggested in Wood, and applicants respectfully submit that the rejection under 35 U.S.C. § 103(a) based upon Wood is traversed based upon the amendments to the claims.

#### **The Double Patenting Rejection**

The Examiner has issued a provisional double patenting rejection citing four copending patent applications. Pursuant to MPEP § 804, if this is the sole remaining rejection prior to issuance of any of the copending applications as patents, this rejection should be withdrawn in this case. While Applicants do not admit that the claims of the

present invention are obvious in view of any one of those copending applications, in the event that one or more of the copending applications issues as a patent prior to this application, Applicants will file a terminal disclaimer to obviate the double patenting rejection.

In view of the foregoing remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes after considering these remarks, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

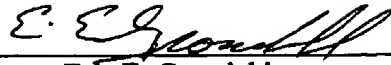
Because the reasons above are sufficient to traverse the rejection, Applicants have not explored, nor do they now present, other possible reasons for traversing such rejections. Nonetheless, Applicants expressly reserve the right to do so, if appropriate, in response to any future Office Action.

A Request for Continued Examination and a Petition for Extension of Time extending the deadline for submission of this paper until May 27, 2006 is filed herewith. No additional fee is believed to be required, as May 27, 2006 was a Saturday, May 29, 2006 was a holiday, and this paper is being filed on the first business day after that date. If any fee is required, or if necessary to cover any deficiency in fees previously paid, authorization is hereby given to charge our Deposit Account No. 50-3569.



Respectfully submitted,

Date: May 30, 2006



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